Migration and Restructuring in Post-Soviet Russia

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When Russia became independent in 1992, it inherited from the Soviet Union a spatial distribution of its population that was incompatible with its emerging market economy. Internally the largest migration stream has been out of the overpopulated Russian north and Far East toward central Russia. At other geographic scales, as a result of decades of Soviet labor policy, there were numerous cities and towns in Russia that had many more workers than they would under market conditions. Simultaneously, the breakup of the Soviet Union caused the large-scale departure of Russians, Russian speakers, and others out of the non-Russian states of the former Soviet Union to Russia. The lifting of exit restrictions did not cause the mass exodus that many had predicted, but it did allow the emigration of many highly skilled persons who could have played a role in the country's transition. As a result of the deterioration of the economy and the opening of the economy to the outside world, there has been a rise in the trafficking of Russian women to the West. With the relaxation of border restrictions, there has been a large, undetermined increase in the amount of illegal migration in Russia. These different migration streams are affected by, and are simultaneously affecting Russia's post-Soviet transition to a market economy and democratic society. In this article I examine the various migration streams that were set off by their breakup of the Soviet Union and the beginning of the transition period, with an emphasis upon the impact both nationally and locally.

The Transition of the Russian Migration System

Migration is just one strategy of adaptation that people employ in response to changing circumstances. About half of the Russian population live in a region other than the one they were born in.[1] Migration theory posits that potential migrants

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calculate a cost-benefit equation comparing their incomes in their current location with those possible in potential destinations, and if the difference outweighs the costs of moving, the person moves. Wages in potential destinations are discounted by possible spells of unemployment. In addition, various noneconomic, quality-of-life measures are factored into a potential migrant's decision-making calculus. Neoclassical economics states that it is differentials in wages among regions (or countries) that cause people to move from low-wage to high-wage regions. As I will show below for Russia, it is the real wage, adjusted for the regional cost-of-living, that drives migration. Gravity models applied to migration have also shown that the cost of migration increases with distance, as the cost of transporting oneself and one's belongings increases the longer the move, and that information about more distant potential destinations is more difficult to obtain.

People who migrate are favorably self-selected compared to those who remain in their place of origin. Migrants tend to be more ambitious, aggressive, and entrepreneurial and in general more able.[2] Because migration is selective, migration streams are skewed by age, sex, education, and life cycle, with levels of migration rising along with levels of education, occupation, and income. Urban dwellers tend to have higher migration rates than people living in rural areas because they possess many of the socioeconomic characteristics associated with high migration rates. Migration rates are highest among people who have just completed their schooling and are embarking on careers. Migration turnover then slows down as people begin to raise families, rising slightly again around retirement age. These tendencies have important implications both for regions of high in-migration and for those with large out-migration: Those areas losing large numbers of people tend to lose the younger, more educated, more able-bodied segments of their populations, and destination regions gain those persons. In the Soviet Union, certain ethnic groups had higher levels of "migrateability" as result of having many of the socioeconomic characteristics associated with migration. They included Russians, other Slavic groups, Tatars, Jews, and "mobilized Europeans"—Armenians, Georgians, Latvians, and Estonians.[3]

Following from this brief summary of migration theory, a number of factors can be identified that influenced migration patterns in post-Soviet Russia. The greatest influence on international migration was the breakup of the Soviet Union into fifteen successor states, causing what had been internal migration within one state to become migration across international borders.[4] The Soviet Union has often been referred to as a museum of different nationalities. Including the fifteen successor states, there were fifty-three ethnic homelands when the Soviet Union broke up, the largest being the Russian Federation. A large portion of post-Soviet migration, but certainly not all, consisted of people returning to their ethnic homelands, including the return of a portion of the Russian diaspora residing in the non-Russian states. In the Soviet Union, both international migration and internal migration were tightly controlled, and external migration control efforts were aimed mainly at keeping people in the country. In post-Soviet Russia, controls over migration have been loosened, and at least de jure control over internal migration has been removed.

Under the centrally planned economy of the Soviet Union, most prices were set administratively, and as a result the income distribution among sectors and occupations was rather narrow; differences in cost of living among regions were rather small. This was partially accomplished with a massive and elaborate system of subsidies, which caused certain sectors to be "overvalued" and others to be "undervalued." The system included a set of regional wage coefficients designed to induce people to migrate to, and work in, priority sectors and regions. Due to the regional concentration of industry, this system benefited some regions more than others. When prices were liberalized in 1992 and most subsidies removed, a rapid rise in the income distribution and greatly increased differentiation in the cost of living among regions ensued. This very quickly caused a change in the variables in people's migration cost-benefit equation. One part of the social contract in the Soviet Union was the maintenance of full employment. In Russia's market economy, unemployment has become a reality and also a factor in migration, where it was not previously. As a result of the sub-optimal location of industry, many Russian enterprises are bankrupt, at least on paper, hindering their ability to maintain full employment.[5] As I will discuss in more detail below, because of peculiarities of Russian enterprise and labor market transition, labor market adjustments are not as predicted by theory, and some of the attendant social costs have been enormous. Soviet enterprises had limited involvement in foreign trade or international institutions. With the opening up of the Russian economy, there has been increased involvement with the outside world, including foreign direct investment, which has further exacerbated differentiation among regions, increased awareness of economic and migration opportunities abroad for Russians, and increased such opportunities for outsiders in Russia.

Migration and Population Change in Post-Soviet Russia

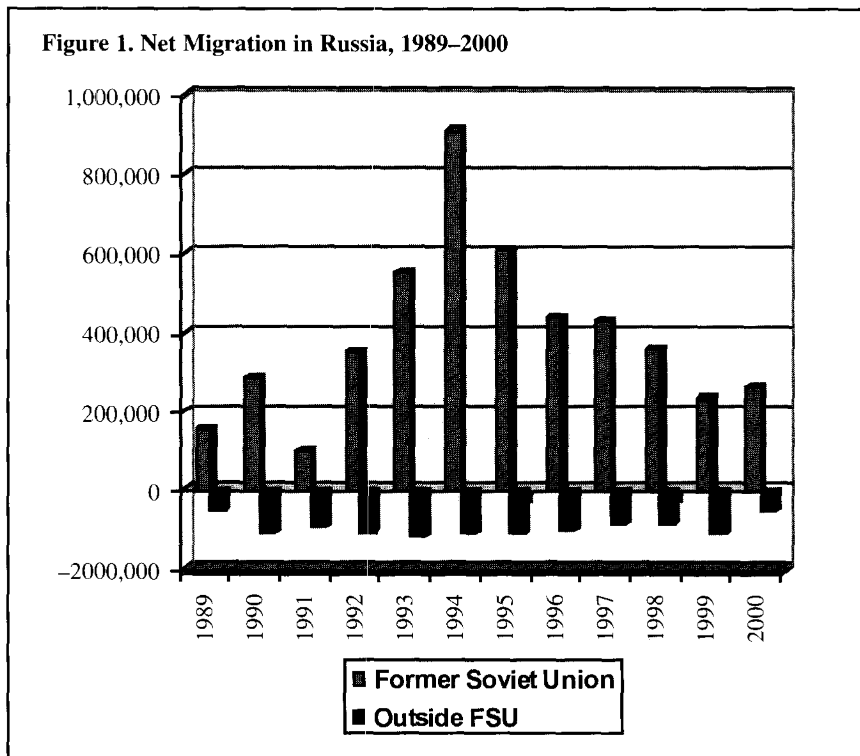
It is well-known that in spite of continued immigration, Russia's population has been declining for much of the past decade, after peaking at 148.7 million in 1992. A situation of natural decrease, where the number of deaths exceeds the number of births, began in Russia in 1992 and has continued as a result of declines in the fertility rate and in life expectancy, and factors inherent in the country's age structure. The decline of the country's population size has received considerable attention from both academics and the country's leadership, with various measures proposed to reverse the trend. By the beginning of 2001, the population had fallen by 3.5 million from its peak, to 145.2 million. Since 1992, the excess of deaths over births has been 6.8 million. Net immigration to the country has compensated for less than half of the natural decrease over that period. In 1999 and 2000, the population decline due to natural decrease was close to a million. With the slowdown in migration and continued low fertility and high mortality, combined with an aging population, Russia's population decline is expected to continue into the future. Reversing the population decline by tapping into the remaining Russian diaspora population has been suggested, and I will return to the subject later.

For most of the Soviet period, there was net out-migration from Russia to the non-Russian states. That trend was reversed in 1975, and from that year until the

breakup of the Soviet Union at the end of 1991, net migration into Russia from the non-Russian FSU states averaged about 160,000 annually. Overall, since 1989, 5.9 million people have migrated to Russia from the other FSU states, and 2 million have left, for a net gain of 3.9 million. Opportunities for legal emigration from the Soviet Union were limited in the mid-1980s, amounting to only about three thousand persons a year.[6] Liberalization of exit restrictions increased the outflow to 9,700 in 1987, 47,500 in 1989, and over 100,000 in 1990. Since that time, net emigration from Russia to the far abroad has averaged just about 100,000 annually, far less than the flows many had predicted once exit barriers were removed.

Net migration to Russia rose rapidly following the breakup of the Soviet Union, peaking at 809,614 in 1994 (see figure 1). In that year, five times as many people moved to Russia from the other FSU states as left. By 1999, net migration to Russia had fallen considerably from this peak, to only 129,230. The levels of migration with the other successor states largely drive the levels of net migration in Russia, as levels of migration with the far abroad have remained rather steady over the decade. Between 1989 and 2000, the population increase from migration, of 3.6 million, consisted of net immigration of 4.7 million from the non-Russian FSU states and net emigration to destinations outside the former Soviet Union of 1.1 million.

Figure 1. Net Migration in Russia, 1989–2000

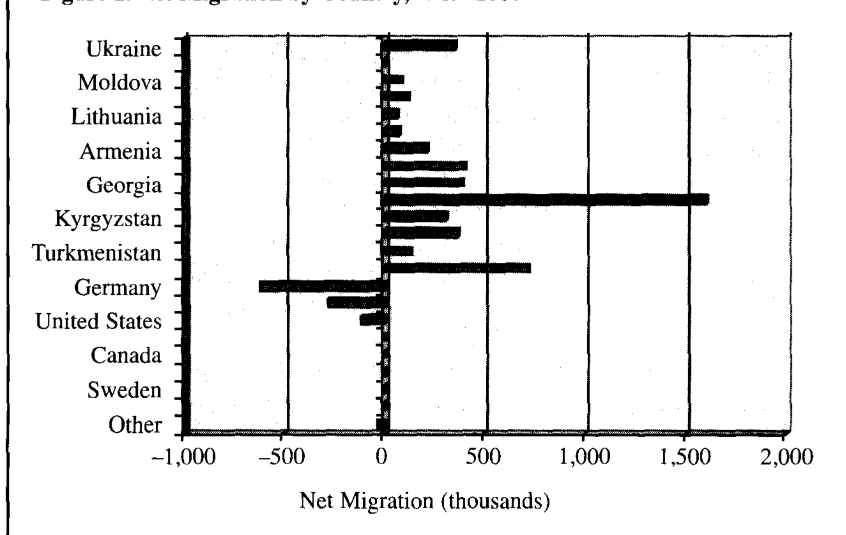


Migration between Russia and the Far Abroad

The patterns of migration by country for Russia since 1989, with both the FSU states and the far abroad, have largely been driven by the nationality composition of those migration streams (see figure 2). Three countries account for the bulk of persons migrating from Russia to locations beyond the former Soviet Union—Germany with 57 percent, Israel with 26 percent, and the United States with 11 percent. Since 1992, the share of total emigrants to the United States has remained rather constant at between 10 and 13 percent of the total to the far abroad. Because of changing circumstances in Russia and changing policies in the destination states, the number and relative shares of those emigrating to Germany and Israel have changed. Prior to the breakup of the Soviet Union, about half of those persons emigrating from Russia went to Israel (at least as their first destination). But starting in 1992, between 50 and 70 percent of migrants leaving Russia went to Germany, and Israel's share went down to about 20 percent.

For the period 1995 to 1999, 45 percent of net migration consisted of Germans, who were attracted by the generous resettlement package for *ausiedler* and the strong pull of the German economy.[7] For the period 1989 to 1995, 52 percent of net migration consisted of Germans.[8] Germans leaving Russia went almost exclusively to Germany, with 99.7 percent of those leaving in the 1995–1999 period doing so. The second-largest group of emigrants were Russians, making up 36 percent over the 1995–1999 period (26 percent in 1989-1995). Because they do not have a homeland outside the Soviet Union, the destination choices of Russians were more dispersed. About half (51.1 percent) went to Germany, slightly less than a quarter (22.9 percent) to Israel, 15 percent to the United States, and 11 percent to other countries. Jews made up 13 percent of migrants and went to

Figure 2. Net Migration by Country, 1989–2000



Israel (54 percent), the United States (23 percent), and Germany (21 percent). Data available for the years 1997 to 1999 show that although the migration flows were predominately emigration from Russia, there was also some immigration to Russia, although the ratio of emigrants to immigrants was about 10 to 1. Russians were the largest group of immigrants, with 10,322 over those three years. According to one set of estimates, as a result of emigration, the Jewish population in Russia had declined by 43 percent and the German population by 49 percent between 1989 and 1999.[9] Those estimates likely overstate the decline of these groups somewhat, especially Germans because of the situational fungiblity of nationality. Persons who had identified themselves as Russians for generations and spoke Russian at home, but who had even a slight claim to German nationality, often used the fact to take advantage of push factors in the deteriorating Russian economy and pull factors in Germany.

Though the emigration to the far abroad has not been large, partially because of the ethnic selectivity of this migration stream, disproportionate numbers of people in highly skilled occupations have chosen to leave. Jews made up disproportionate shares of the country's engineers, physicians, scientific personnel, teachers, and production and technical managers. Even among manual occupations, Jews constituted disproportionate shares of watchmakers, jewelers, bookbinders, shoemakers, sewers, tanners, and furriers—in other words, highly skilled craft occupations.[10] Many of these people are taking advantage of the opportunity to move to Israel and other western countries. Of emigrants from Russia, 21 percent have a higher education, against 13.3 percent for the country as a whole. Of those leaving for Israel, 30 percent have a higher education; of those leaving for the United States, 42 percent. This "brain drain" pattern is consistent with migration theory. People who choose to migrate tend to be among the young and more educated cohorts in any society. One of the key challenges for all Russia is finding a way to retain these segments of society to play a role in the transition process.

Another disturbing trend is the rise in the number of Russian women trafficked abroad and forced into prostitution. Because of the underground and illegal nature of trafficking, exact numbers are difficult to obtain, but estimates of 50,000 Russian women annually lured into sexual slavery in Western Europe, the Middle East, the United States, and Asia are commonly seen, with overall numbers since the breakup of the Soviet Union ranging to 500,000. The causes of Russian women's falling victim to trafficking are similar those elsewhere in the world: High female unemployment and few job opportunities, an idealized view of life in the West, and lack of enforcement and legislation against trafficking. The means of luring women in Russia are also similar to those in other parts of the world. Young women respond to usually legitimate ads for employment abroad as nannies, waitresses, or dancers or in other jobs where they have dreams of high wages. Free transport and an easing of bureaucratic barriers making them even more appealing. Once the women are abroad, passports are confiscated; the women are often beaten or threatened, isolated, and told that they will have to work off large "debts" via prostitution. A lack of laws against trafficking, the

women's being outside their country, and threats from traffickers make women afraid to speak out and make the practice a highly lucrative, low-risk endeavor. In addition to the obvious human toll on the women involved, if the figure of half a million women is close to correct, then the loss of so many women in prime child-bearing years is also having an impact on the already low Russian fertility rate. There may be some hope as the International Organization for Migration and a coalition of 43 nongovernmental organizations recently have sought to start an information campaign to raise awareness among rural women to help them avoid being lured by traffickers and to seek legislation making trafficking of women a crime.[11]

Migration Between Russia and the Former Soviet Union

Since 1989, Russia has had a positive migration balance every year with all of the other FSU states, except for a few years with the other two Slavic states. Between Russia and the non-Russian states, the two states with the largest Russian diaspora populations—Ukraine and Kazakhstan—account for the largest shares of immigration between 1989 and 2000, each with a quarter of total immigrants. Over all, Central Asia has been the source for about half of all migrants to Russia, the three Transcaucasus states 15 percent, and the Baltics only 4 percent. The two other Slavic states, Ukraine (46 percent) and Belarus (10 percent), along with Kazakhstan (18 percent), account for the majority of emigration from Russia since the 1989 census.

The major push factor behind the migration of both Russians and non-Russians seems to be ethnic violence. Aside from the war in Chechniya, most has not been aimed at Russians, but they are caught in the middle of it. Tajiks, Armenians, Georgians, and Azeris all increased their numbers in Russia significantly as result of migration (see table 1). The common denominator among these groups was episodes of violence in their ethnic homelands during the post-Soviet period, accompanied by severe economic downturns. Only four of the larger groups, Latvians, Kazakhs, Lithuanians, and Turkmen, have net emigration from Russia over the post-Soviet period

During the chaotic period from 1989 to 1993, while the Soviet Union was in the process of dissolving, some of the titular nationalities of the non-Russian successor states and other large nationalities had net emigration from Russia for some years and net immigration for others, with no clear pattern emerging. Of the fourteen non-Russian titular nationalities, only Armenians had net immigration to Russia every year from 1989 to 1999. Other larger nationalities, Germans, Ossetians, Tatars, and Bashkirs, all also had net immigration each year.[12] Since 1994, a clear pattern of migration of the fourteen non-Russian titular nationalities of the successor states has emerged; every one has had net immigration to Russia each year. This is a pattern similar to that experienced by other empires as they broke apart, with the colonized nationalities following the dominant group as they withdrew.

In the 1989 USSR population census, a total of 25,289,543 persons living outside of Russia stated that their nationality was Russian. Since that time, there has

TABLE 1. Nationality Composition of Migration between Russia and the FSU, 1989–1999 (thousands)

	Net migration	Immigration	Emigration	Numbers of each nationality in Russia, 1989	Net migration, 1989–1999, as percentage of 1989 total
Total	4,63.0	8,371.4	3,908.3		
Russians	3,045.8	4,928.9	1,883.1	119,866	2.5
Ukranians	242.9	1,120.9	878.0	4,363	5.6
Belarussians	30.5	231.9	201.5	1,206	2.5
Moldovans	7.4	99.9	92.5	173	4.3
Latvians	0.6	5.9	5.3	47	1.3
Lithuanians	–1.4	10.7	12.1	70	–2.0
Estonians	1.0	3.9	2.9	46	2.2
Armenians	328.6	394.7	66.1	532	61.8
Azeris	76.7	204.3	127.6	336	22.8
Georgians	42.4	82.0	39.6	131	32.3
Kazakhs	–5.6	105.3	110.8	636	–0.9
Kyrgyz	–4.7	17.7	22.4	42	–11.3
Tajiks	28.3	46.1	17.7	38	74.6
Turkmen	–1.4	18.5	19.8	40	–3.4
Uzbeks	10.8	74.1	63.3	127	8.5
Jews	7.2	22.2	14.9	537	1.3
Germans	86.4	134.1	47.7	842	10.3
Ossetians	40.1	44.6	4.6	402	10.0
Tatars	228.3	322.7	94.4	5,522	4.1
Bashkir	33.5	43.6	10.1	1,345	2.5
Other	265.5	459.5	194.0		

Sources: 1994–99: Goskomstat Rossii, *Demograficheskiy yezhegodnik Rossii: Statisticheskiy sbornik, 2000*, 354–57; 1989–93: Goskomstat Rossii, *Chislennost' i sotsial'no-demograficheskiye kharakteristiki Russkogo naseleniya v respublikaka byvshego SSSR* (Moscow, 1994), 28–29. Figures for Ossetians and Bashkir only cover 1991–93.

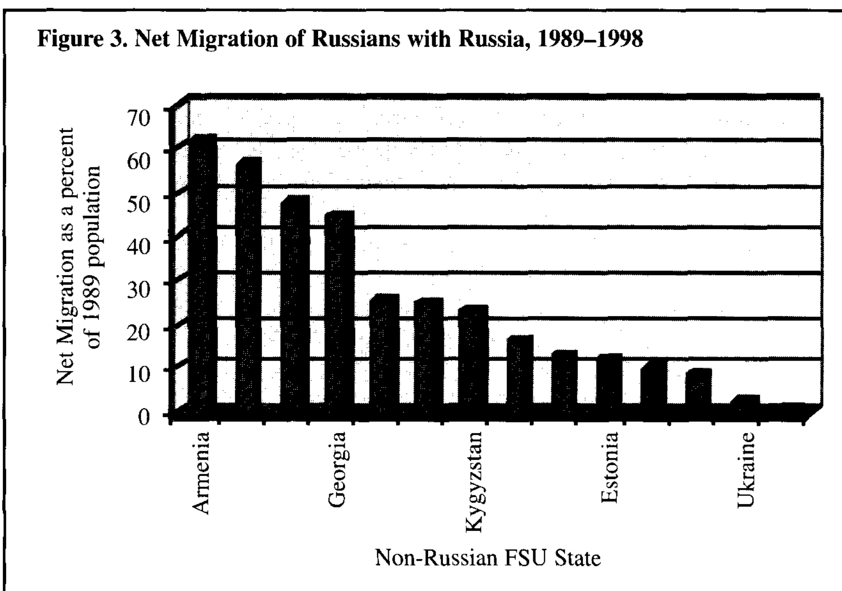
been a net migration to Russia of 3,045,808 persons whose official passports state that they are Russian. Because nationality is self-reported without verification, these may not be entirely the same groups. However, if the two groups can be compared, it means that there has been a net migration to Russia of 12.0 percent of the Russian diaspora population, or one in eight Russians living outside of Russia. This net migration consisted of immigration to Russia of 4.9 million Russians and an emigration of 1.9 million. If just the immigration figure were considered, it would represent 19.5 percent of the Russian diaspora population.

A clear regional grouping emerges in terms of the percentages of Russians residing in the non-Russian FSU states who have left each of the newly independent states (see figure 3). From four states—Armenia, Tajikistan, Azerbaijan, and Georgia—half or more of the Russian populations has chosen migration as a strategy of adaptation. Significant shares of the titular populations of these states have fled as well, because of deteriorating economic conditions. From two states, Uzbekistan and Kyrgyzstan, roughly a quarter of the Russian population has left. Kazakhstan makes up its own group in terms of the share of Russians who have left (17.8 percent). A fourth group is the three Baltic states and Moldova, which between 10 and 13 percent of the Russian diaspora populations have left. The other two Slavic states make up a fifth group from which only small portions of the Russian population have returned.

Internal Migration: The Depopulation of Siberia and the Problem of One-Company Towns

The patterns of internal migration in post-Soviet Russia must be examined in the context of economic restructuring, and more specifically the restructuring of the

Figure 3. Net Migration of Russians with Russia, 1989–1998



labor market. They also must be examined at several different geographic scales. The predominant internal migration flow has been out of Siberia, the Far East, and the European north toward central Russia. For most of the Soviet period, the predominant internal migration pattern was outward from this central core in European Russia to the periphery in Siberia and the north. This is similar to migration patterns between Russia and the non-Russian FSU states, which for most of the Soviet period were outward from Russia. Thus, the patterns of both internal and international migration in the post-Soviet period represent a reversal of decades of centrally planned migration. Eight of Russia's eleven larger economic regions reversed their direction of net migration between the 1980s and 1990s, with periphery regions of the North, East Siberia, West Siberia, and the Far East going from net in-migration regions in the 1980s, to net out-migration regions in the 1990s. Four central regions, the Volga-Vytatka, Central Chernozem, Volga, and Urals regions switched from being donor to recipient regions.[13] It is not just those leaving the periphery regions within the country that are concentrating in areas of central Russia, but also those returning to Russia from the non-Russian states. Even though they are responding to a different set of push factors, they are obviously being drawn to regions by the same set of pull factors as migrants from elsewhere in Russia. In fact, return migration to Russia from the non-Russian states is concentrated in a small number of regions, mostly along the southern border of Russia in close proximity to the states they departed from. Seventeen regions along the southern border received over half of all migrants from the other FSU states.

Combining patterns of net migration with trends in natural increase or decrease (the difference between births and deaths), the regions of Russia can be divided into six groups. Whether the population of a region is growing or declining, and whether that is due to changes in net migration or natural increase/decrease, are important because of the differential age structure of each. Because of the slowdown in fertility during the transition period, Russia as a whole and many of its regions are "aging" quite rapidly.[14] Regions that are experiencing high levels of out-migration are losing people in the younger, working ages, leaving them with an increasingly immobile elderly population. Those regions gaining large numbers of people through migration are adding them to their young adult populations, which can be a boon to their economies if the local economy is growing fast enough to provide jobs.

Overall during the 1990s, the population of 40 regions increased, and that in 49 regions declined.[15] By 1999, only 10 of 89 regions were still growing. Only 10 regions had both more people arrive than leave, and more births than deaths during the last decade. All but one of those regions were ethnic homelands; they included Chuvashia, Tatarstan, Bashkortostan, and others in the North Caucasus and West Siberia. In 1999, only three of these regions continued to combine net in-migration with positive natural increase. Twenty-four regions had more deaths than births during the 1990s but continued to grow because in-migration exceeded the population decline from natural decrease. They included a large array of regions, including Leningrad oblast, most of the Volga region, and the three regions in North Caucasus, which had the highest rates of in-migration in Russia

—Stavropol, Krasnodar, and Rostov. Only six regions grew through the 1990s as a result of natural increase exceeding net out-migration. These were all ethnic homelands either in Siberia or the North Caucasus.

The pattern for 23 regions and Russia as a whole was population decline through negative natural increase and net immigration. This included most oblasts in the Northwest region, including St. Petersburg; most of those in the Central region, including Moscow city and oblast; and most in the Central Chernozem region. By 1999, 45 regions were experiencing similar demographic trends, including nearly all of central Russia, the Urals, and regions in West Siberia. Sixteen regions had more births than deaths but were declining in population size as a result of out-migration, in some cases extreme levels of out-migration. They included periphery regions in the European north and most regions in east Siberia and the Far East. Finally, 10 regions were declining because of both negative natural increases and net out-migration, including several large regions in Siberia and the Far East such as Irkutsk, Primorsky and Khabarovsk krais, and Sakhalin. By 1999, the number of regions experiencing these combined trends was 22 and included nearly all regions in the Far East and the North, and many others in both East and West Siberia.

> ***"Examination of regional migration patterns in post-Soviet Russia . . . does not provide much insight into the economic causes of migration."***

Examination of regional migration patterns in post-Soviet Russia, while illustrative of geographic patterns, hides considerable detail at lower geographic scales and does not provide much insight into the economic causes of migration. One source, referring to the late Soviet period, claims that half of Russian cities are one-company towns.[16] After a decade of transition, the situation does not seem to have changed much, as a quarter of cities with populations over 100,000 were classified as mono-profile towns (more than 5,000 workers and more than half in one enterprise).[17] The greatest concentration of one-company towns was in cities of 25,000 or less, of which 58 percent were considered mono-profile towns. Many of these were narrowly focused, resource extraction towns in forestry and mining. Unfortunately, there are not enough socioeconomic data at that level to allow detailed analysis. It should be kept in mind, however, that people in these one-company towns do not have many employment alternatives.

During the Soviet period, Russia had a rather egalitarian wage structure across occupations and regions that at least met the minimum living standard, and unemployment was not allowed to exist. In spite of those constraints, migration patterns among regions largely corresponded to neoclassical theories of migration derived from the experience of western countries.[18] Many viewed this low-stakes but stable labor market as a barrier to economic growth. When Russia embarked on its economic transition, it liberalized wages and prices, eliminated guaranteed

employment and formal constraints on labor mobility, and started the privatization of most state enterprises. Reformers believed that these measures would reallocate labor from inefficient to more productive uses and stimulate economic growth.[19] Simultaneously with the movement of workers among industries, within industries, and among firms of different sizes, considerable intra-country migration would be expected, once firm and individual decision making became decentralized.[20] A decline in output was expected and was thought to be needed to reallocate labor (and capital) from insolvent state enterprises to more productive uses. Of course, what happened was that the decline in output was much larger than many had expected in Russia, as well as the other transition states, but the accompanying decline in employment was not nearly as large. From 1992 to 1995, there was a 40 percent drop in GDP but only a 7 percent drop in employment. It is a peculiarity of the labor market transition in Russia that the employment adjustment was much smaller, relative to output declines than in other transition countries.[21]

"Studies have shown that workers' propensity to leave a region decreases with the degree of concentration of the local labor market."

Migration associated with labor market transition in post-Soviet Russia was expected to be influenced by four factors: growing differentiation among regions would cause people to move in response to economic or quality-of-life variables; elimination of administrative barriers would increase mobility; reforms would create a national labor market; and factors in the neoclassical model that previously had little differentiation across regions would start to apply.[22] There have not been many household surveys that have asked about reasons for migration, so most analysis has used regions as the unit of analysis; they have concluded that characteristics of regions do matter. One such study examined four sets of regional factors: geography, economic conditions, quality of life, and degree of reforms. The study showed that regions with lower unemployment, higher real wages, and more profitable enterprises attracted more migrants. This is as expected, with people migrating to regions with better labor market prospects. Per capita regional product did not influence migration but seemed to be overwhelmed by geographic factors. That is, regions with high levels of out-migration, such as those in the north and east, have higher gross regional products, but those in the south that share a border with a CIS state tend to have high rates of in-migration, even with low GRP. Geographic and economic factors appear to operate independently in determining post-Soviet migration patterns. The same study found that quality-of-life measures, such as housing availability, crime rates, and share of regional budget allocated to social services, did not have a strong effect on migration, nor did indicators of degree of reform.

What is difficult to determine from analysis of migration at the regional level is that while there is evidence of labor mobility, creation of new jobs is limited.

Greater job loss and downward earnings mobility show that structural reforms and economic crisis are dislocating large numbers of Russian workers and that the free fall in real wages has substituted for the shedding of excess labor from monolithic state enterprises. Enterprise restructuring is slower than expected, and enterprises are engaging in noncompetitive practices that restrict optimal operation of the labor markets, including labor hoarding, forced sick leave, and wage arrears instead of reductions in employment. The importance of regional factors in determination of the level of wages, wage arrears, and wage inequality suggests that the labor market is regionally segmented. As mentioned above, with so many Russian communities constructed around a single enterprise, and with the primitive nature of the housing market, workers have few outside employment options. High labor mobility within regions does not necessarily imply high mobility among regions. Partly due to the manner of Russian privatization (which mainly consisted of worker-management buyouts), soft budget constraints on enterprises, and pressure from regional governments to maintain employment, managers of socialist enterprises did not have profit incentives to use labor and other resources effectively and continued to rely on political bargaining, subsidies, and severance requirements to avoid labor shedding.

Studies have shown that workers' propensity to leave a region decreases with the degree of concentration of the local labor market. This attachment can only exist if there are not too many firms in the local labor market, which is the case in many Russian cities as shown above.[23] Labor markets do seem to be regionally segmented so that interregional migration does not seem to be eliminating regional wage differences. Though few firms are monopolists at the national level, many are able to remain monopsonists at the local level because of the highly segmented markets.[24] Though there is high labor turnover, it is almost exclusively local. Firms have both the incentives and the means to restrict worker movement left over from the Soviet period, in which firms provided a wide range of nonmonetary benefits to their workers and the absence of a strong social security network reduced workers' mobility through fear of exclusion from firm-provided social services. Migration involves transportation and search costs, but workers have no collateral and are paid in kind, rather than in cash. Also, people in Russia tend to obtain jobs through personal contacts, and poor information about other locations may explain low geographic mobility. A study of potential migrants from the northern regions showed that while 55 to 68 percent wanted to leave for the Russian *materik* (mainland), 89 to 96 percent said that they or their families had insufficient resources to finance such a move.

The incomplete reallocation of labor among sectors and regions is proving to be a drag on economic recovery. There is not much theory on the "correct" spatial allocation of a population within a country, but it is apparent that the current distribution within Russia is far from optimal. Increased enterprise restructuring would hasten the process of job destruction/job creation that is necessary, but other measures need to be taken as well, as the labor market is not "flexible" in terms of efficiency in reallocating resources to their optimal use. Appropriate policy measures remain somewhat elusive because of the mixed results from the

many studies that have been done, but it is obvious that ways need to be found to force enterprises to shed labor through bankruptcy rather than resort to hiring more workers. Combinations of both passive and active labor market policies are needed, including reforms in social safety nets to reduce risk, in labor contract law, and collective bargaining law. Though the 1993 constitution formally banned residence restrictions, legal barriers and *propiska* remain in many regions, in spite of rulings to the contrary by the courts.[25] As with the internal borders erected by regional governments pursuing their own political agendas, labor mobility seems to be subject also to internal borders. There is also evidence that the high cost of travel and housing is hindering many potential students from access to the best educational institutions in Moscow, St. Petersburg, and other large cities, contributing to the breakdown in Russia's "common educational space." In the late 1980s, 75 percent of students in Moscow universities were from outside the city, but now only a quarter of students are from outside the capital.[26]

The incomplete transition of the labor market and the less-than-optimal spatial distribution of the population can be best illustrated by examining the experience of the Russian north during the transition period.[27] This was a special set of regions that were among the most heavily subsidized and where industrial development deviated most from market criteria. The 27 regions classified as belonging to the "Far North" or "regions equivalent to the North" make up 70 percent of Russian territory but contain only 8 percent of the population.[28] The area encompasses much of Siberia, the Far East, and the European north and contains the majority of Russia's oil, gas, diamonds, gold, timber, fish, and other natural resources. The manner in which Russia went about developing the resources of its northern and arctic periphery is very different than that of other northern countries. As a result, the Russian north is 2.5 times as densely populated as Alaska and 50 times as densely populated as Greenland and northern Canada. Ten of the eleven urban settlements in these northern regions with populations over 200,000 are located in Russia (the exception being Anchorage, Alaska).

Most northern settlements were founded and initially staffed with forced, *gulag* labor, but at the end of the Soviet period, there existed a long list of benefits to individuals who migrated to the north, lived and worked there, and then returned upon completion of a tour of duty or career. The most notable of these were regional wage differentials that amounted to up to twice the salary for a similar occupation in central Russia, a powerful inducement in a country where the cost of living was roughly comparable across regions and where there were few other, legal opportunities to earn such high salaries. To support this network of industrial settlements in the northern and far eastern periphery, the Soviet Union sank considerable sums into the "northern shipment" (*severny zavoz*), a massive logistical supply effort to sustain life in these cold, remote locations. Altogether, the various northern subsidies and benefits accounted for 3.5 percent of Russia's GDP, making it obvious that the Soviet Union undertook a development policy for the resources of its northern territories that has proved to be fiscally, economically, and environmentally unsustainable under market conditions. The Russian government cannot afford such a massive level of financial and logisti-

cal support to the north. The only choice for many of the small, narrowly specialized mining and resource extraction towns is simply abandonment. As a result of increased transportation costs between central Russia and the periphery, many of the regions in the Far East had begun to purchase their food, fuel, and other goods from neighboring Pacific Rim countries using hard currency. Following the August 1998 ruble crisis, when the cost of these shipments quadrupled almost overnight, there was talk of a need for emergency evacuation of many small, remote northern settlements.

As a result of the various incentives, migration continued into the north, peaking in the mid 1980s. During Gorbachev's perestroika era, planners began to lower investment in the north, and with the introduction of limited forms of private enterprise, the north ceased to be the only place in the Soviet Union where talented, entrepreneurial people could legitimately earn high salaries. Migration levels dropped, turned negative in 1989, and then turned into a mass exodus in 1992 when the reforms began. Since 1989, there has been a net out-migration of 11 percent of the population from the northern regions. Half of the 16 regions classified as the Far North had over a quarter of their populations migrate out during the transition period. At the extreme, two regions in the northeast, Magadan and Chukotka, have respectively had 42 and 58 percent of their populations leave.

"The depopulation of the periphery has raised fears among Russia's leadership of Chinese expansion into the Russian Far East."

At both the household and macro levels, many would view this large-scale emigration as a rational adjustment to changing economic conditions, but like many aspects of the transition in Russia, it has not as been as smooth as desired and is far from complete. As mentioned above, most migration streams are not uniform across age, sex, and social groups, and neither has been the migration out of the Russian north during the transition. Overall, from 1989 to 1998, there was a 7.1 percent decline in the population in the Far North. There was a proportionally larger decline in the working age population (males 16 to 59 and females 16 to 54) of 15 percent, and an even larger decline in the young working ages (25 to 39) of 24 percent. At the same time, there was an increase in the retirement-age population of 9 percent. Although a small portion of the increase in the elderly population is due to aging, the bulk of it is due to a breakdown in the system of migration assistance that helped people settle in the Russian "mainland" upon retirement. This, coupled with rapid inflation in the early transition period, has wiped out savings and caused a buildup in the north of elderly persons who would like to leave but cannot afford to. Looking at migrants by educational level, one sees that the number of people leaving the north exceeds the number coming at every educational level. However, there are disproportionably high ratios of

departures to arrivals among those with higher and specialized secondary education. The result is that the north is left with an increasingly less skilled, less educated, elderly population that cannot afford to leave. There has also been a huge impact on the northern indigenous populations, who are unlikely to migrate out of the area but whose lifestyles have been devastated by decades of Soviet development policy.[29]

The depopulation of the periphery has also raised fears among Russia's leadership of Chinese expansion into the Russian Far East. The opening of the borders brought about a 10 percent decline in the region's population during the 1990s, and few prospects exist for any quick population rise either from natural increase or in-migration. The fears are predicated on the simple demographic fact that there are only 7 million persons living in the Russian Far East, 5 million in the three southern regions along the Chinese border, while there are 102 million in the three neighboring Chinese provinces.[30] Based on these unbalanced numbers, some call the Chinese demographic expansion inevitable and even desirable.[31] Many others, including local leaders, exaggerate claims of the number of Chinese in the region with figures of up to 2 million. They play on this fear with the logic that following on the heels of demographic expansion will be territorial expansion by China into a region that has been under Soviet control for barely a century. With the opening up of the region to foreigners, there has in fact been increased travel by Chinese and others into the region. However, much of it has been very carefully controlled, with most Chinese working in agriculture or construction or as shuttle traders. The latter are rather welcome following the virtual collapse of the supply of food and consumer goods during the transition period. One study based on review of local border-crossing records, interviews with local officials, and field observations gave somê clarity to the hysteria.[32] Although the number of visitors from the People's Republic of China (PRC) to Primorskiy Krai increased to 80,000 in 1999, only a small fraction failed to return, following the institution of sanctions and stricter enforcement in 1994. The number of legally employed PRC citizens in the krai has remained stable at about 6,000–8,000 during the second half of the 1990s. At any given time, there were no more than 5,000 Chinese in Primorye, and most who were there worked under very strict labor contracts. Thus, the demographic fact of vastly different population densities between the countries does not necessarily lead to inevitable territorial expansion.[33]

Government Responses to the Migration Situation

The issue of population decline in Russia has recently begun to attract the attention of the country's leadership. In his first state-of-the-nation address as Russia's president, Vladimir Putin listed the decline and simultaneous aging of the population along with rising debt and an eroding infrastructure among the country's most serious problems. He proposed measures for a further return of the remaining Russian and Russian-speaking diaspora population to compensate for the demographic shortfall. In 1950, there were ten workers supporting each pensioner.[34] By 1995, this figure had declined to six. It is expected to fall further, so

that by 2050, there will be only two workers supporting each pensioner, causing a serious drain on Russia's pay-as-you-go pension system and its already underfunded health care system.

The situation facing Russia—a declining and simultaneously aging population—is not unlike that in various western countries with low, usually below-replacement fertility (less than two children per woman). Like Russia, many of those countries are considering "replacement migration"—international migration to offset population decline and aging.[35] One way that Russia differs in this regard, and may actually have an advantage is the existence of a large pool of educated people who speak the same language, are of a similar culture if not ethnic group, and are often in fact natives of Russia, whose incorporation into Russian society would be easier. When the United States, Europe, or historically immigration-shy Japan consider replacement migration, they must often turn to people who are less educated, do not speak the language of the host country, and are of a different culture, complicating incorporation.

According to the recent United Nations population projections used as a basis for study of the feasibility of replacement migration, the Russian population is expected to decline to 121 million by 2050. Goskomstat and others project much lower population totals, in some cases less than 100 million. Based on the fertility, mortality, and age structure inherent in the UN projections, the numbers of migrants necessary to maintain the same population size, working age population, and support ratio were calculated. For Russia to maintain the same population size as in 1995, there would have to be a net in-migration of 24.9 million in the first half of the twenty-first century. For the size of the working-age population to stay the same, there would have to be a net migration of 35.8 million. Even the lower figure implies that the entire Russian diaspora in the non-Russian states would have to return. The constant population figure implies an average annual migration to Russia of about a half million, and to maintain a constant labor force requires annual migration of over 700,000. Compare these figures to the recent peak of migration of 810,000 and the drastically reduced 1999 net migration of 165,000. Although it appears likely that Russia's migration balance will continue to be positive, much of the post-Soviet migration appears to have exhausted itself and thus the possibilities of maintaining the current demographic balance through migration appear slim. In the absence of migration, to maintain the same ratio of workers to pensioners would require raising the retirement age to seventy-three, a politically unpopular proposition in a country where the current life expectancy for both sexes combined is sixty-six.

In addition to calling for a further return of the remaining diaspora population was the directive that the destinations of the returnees would have to rigidly control to labor-deficit areas where they were most needed. Statements such as this imply that Russia's migration policy lacks a coherent direction and continues to rely on sticks rather than carrots, something that a more sophisticated population exposed to a global economy would not likely respond to. The implications of a large-scale return on Russia's housing and labor markets and on relations with neighboring countries have obviously not been well thought through. Russia lacks

key legislation regarding foreign labor, stateless persons, asylum, and other critical migration-related areas.[36] It is obvious that Russia's migration policy and legislation lag behind the new social reality it confronts.

NOTES

1. Commonwealth of Independent States Statistical Committee and East View Publications, *1989 USSR Population Census, CD-ROM* (Minneapolis, MN: Eastview, 1996).
2. Barry R. Chiswick, "Are Immigrants Favorably Self-Selected? An Economic Analysis," in *Migration Theory: Talking Across Disciplines*, eds. Caroline B. Brettell and James F. Hollifield (New York: Routledge, 2000), 61–76.
3. Robert A. Lewis, Richard H. Rowland, and Ralph S Clem, *Nationality and Population Change in Russia and the USSR: An Evaluation of Census Data, 1897–1970* (New York: Praeger, 1976), 45.
4. Technically, through 1991, migration between Russia and the other FSU states was internal migration. But for ease of terminology, I will refer to all migration between Russia and the other successor states as international migration.
5. Douglas Sutherland and Philip Hanson, "Demographic Responses to Regional Economic Change: Inter-Regional Migration," *Regional Economic Change in Russia*, eds. Philip Hanson and Michael Bradshaw (Cheltenham, U.K.: Edward Elgar, 2000), 76–96.
6. Goskomstat Rossii, "Natsional'nyy sostav migrantov v obmene naseleniyem mezhdu Rossiy i zarubezhnymi stranami," *Informatsionnyy statisticheskiy byulleten'* 8 (August 1996): 32–37.
7. Data on the nationality composition of migration with the far abroad are available from several sources that present somewhat different pictures. For instance, the Russian demographic yearbook (Goskomstat Rossii, 2000a, 313–14) shows an immigration from the far abroad in 1999 of only 542 and an emigration of 108,263 for a net emigration of 107,721. A low-tirazh Goskomstat publication on migration (Goskomstat Rossii, 2000b, 99–104) shows an immigration of 13,071 and emigration of 85,259 for a net emigration of 72,188. The later source gives detailed data on the nationality composition of migration for the countries of the far abroad and is thus used in the analysis in this section.
8. Goskomstat Rossii, "Natsional'nyy sostav migrantov."
9. Timothy Heleniak, "The End of an Empire: Migration and the Changing Nationality Composition of the Soviet Successor States," *Diasporas and Ethnic Migrants in 20th Century Europe*, eds. Rainer Munz and Rainer Ohliger (Frank Case, forthcoming).
10. Michael Paul Sacks, "Privilege and Prejudice: The Occupation of Jews in Russia in 1989," *Slavic Review* 2 (Summer 1998): 247–66.
11. John Daniszewski, "Russian Coalition Fights Sex Slavery," *Los Angeles Times*, 17 May 2001.
12. The Ossetian homeland, North and South Ossetia, is split between Russia and Georgia. Their homeland in Georgia has been the scene of considerable violence in the post-Soviet period, which has been a push factor.
13. Timothy Heleniak, "Internal Migration in Russia During the Economic Transition," *Post-Soviet Geography and Economics* 2 (February 1997): 38, 81–104.
14. For a more complete discussion see Timothy Heleniak, "The Geography of Population Aging in the Russian Federation," *From Red to Gray: Aging in the Russian Federation*, ed. Cynthia Buckley (forthcoming).
15. This is based on an update of the tables in Heleniak, "Internal Migration," using population data from various publications of Goskomstat Rossii.
16. Annette Brown, "Industrial Adjustment and Regional Labor Markets in Russia," (paper presented at the annual ASSA meeting, Boston, MA, January 1994).
17. Goskomstat Rossi, *Chislennost' naseleniya Rossiyskoy Federatsii po gorodam, poselkam gorodskogo tipa i rayonam na yanvarya 1 1999 g.* (Moscow: 1999), 16–17;

Expert Institute, *Mono-profile Towns and Town-Forming Enterprises of the Russian Federation: Review Report* (Moscow: Expert Institute, 2000), 25.

18. Beth A. Mitcheck, "Geographical and Economic Determinants of Interregional Migration in the USSR, 1968–1985," *Soviet Geography* 3 (March 1991): 32, 168–89.

19. Theodore P. Gerber, "Labor Markets, Transition, and Labor Market Transition(s) in Contemporary Russia," (paper presented at the annual meeting of the American Sociological Association, Washington, D.C., August 2000).

20. Sutherland and Hanson, "Demographic Responses."

21. Mansoora Rashid, "Russian Labor Market Study Concept Note," draft, 18 May 2000.

22. Theodore P. Gerber, "Regional Migration Dynamics in Russia since the Collapse of Communism," (paper presented at the annual meeting of the Population Association of American, Los Angeles, CA, 23–25 March 2000).

23. Guido Friebal and Segei Guriev, "Should I Stay or Can I Go? Worker Attachment in Russia," draft, November 2000.

24. Brown, "Industrial Adjustment."

25. Sutherland and Hanson, "Demographic Responses."

26. Paul Goble, "When Enrollment Patterns Shift," *RFE/RL*, 11 April 2001.

27. Timothy Heleniak, "Out-Migration and Depopulation of the Russian North during the 1990s," *Post-Soviet Geography and Economics* 3 (April–May 1999): 40, 155–205; Timothy Heleniak, *Migration from the Russian North During the Transition Period*, Social Protection Discussion Paper no. 9925, (Washington, D.C.: World Bank, 1999).

28. Goskomstat Rossii, *Rossiyskiy statisticheskiy yezhegodnik* (Moscow: Goskomstat Rossi, 2000), 32.

29. For more on northern natives and the impact of transition, see Anna M. Kerttula, *Antler on the Sea: The Yu'ik and Chukchi of the Russian Far East* (Ithaca: Cornell University Press, 2000).

30. Timothy Heleniak, "Demographic Change in the Russian Far East," in *The Russian Far East and Asia-Pacific: Unfulfilled Potential*, ed. Michael Bradshaw (Honolulu: Curzon, forthcoming).

31. Zhanna Zayonchkovskaya, "Chinese Demographic Expansion into Russia: Myth or Inevitability?" *Population under Duress: The Geodemography of Post-Soviet Russia*, eds. George J. Demko, Grigory Ioffe, and Zhanna Zayonchkovskaya (Boulder: Westview Press, 1999), 137–48.

32. Mikhail A. Alexseev, "Socioeconomic and Security Implications of Chinese Migration in the Russian Far East," *Post-Soviet Geography and Economics* 2 (March 2001): 122–41

33. Vladimir Kontorivich, "Can Russia Resettle the Far East?" *Post-Communist Economics* 3 (2000): 365–84.

34. For international comparability, workers are defined here as those aged fifteen to sixty-four and pensioners as those sixty-five and older.

35. United Nations, *Replacement Migration: Is It a Solution to Declining and Aging Populations?* (New York: Population Division, Department of Economic and Social Affairs, 4 May 2000).

36. United Nations, *Human Development Report for the Russian Federation* (New York: UNDP, March 2001).